

REMARKS

Claims 1-11 are pending in the present application, and have been rejected.

The examiner has rejected claims 1-11 under 35 U.S.C. § 102(e), as being anticipated by Grilli U.S. Patent No. 6,438,117, hereinafter "Grilli". The applicant respectfully requests reconsideration on this ground of rejection in view of the remarks below.

Grilli pertains to hybrid cellular communications networks, incorporating both GSM and CDMA elements. It thus describes methods and apparatus for use in a mixed TDMA/CDMA cellular communications network, in particular methods and apparatus enabling handover of a subscriber unit between TDMA and CDMA base stations without interrupting communications (col. 2, lines 7-13). Thus, all the features described in Grilli which are referred to by the Examiner in the Office Action are features of methods and apparatus enabling handover.

The invention claimed in claim 1, in contrast, is a method for allocating radio resources, in particular for establishing an outgoing call in a system for radio communications with mobiles. Such an outgoing call refers to a call originating from a mobile terminal intended for another terminal, mobile or fixed. The claimed subject matter is not concerned with the issue of handovers.

It is believed that the Examiner cites Grilli because a method for performing handovers, on the one hand, and a method for establishing an outgoing call, on the other hand, have in common that radio resources have to be allocated, in the target cell for the handover and in the cell of origin of the call, respectively. However, as will be explained below, this is the only aspect that Grilli and the claimed invention have in common.

In the embodiments disclosed in Grilli, a mixed GSM/CDMA cellular communications system includes both TDMA and CDMA base stations, jointly controlled by a mobile switching center (MSC). A subscriber unit in the system, also referred to as a mobile station (MS), is capable of communicating with both types of base stations, by appropriately switching between TDMA and CDMA air interfaces, while preferably using GSM network protocols over both types of interface. For the purpose of this handover, the CDMA cells are mapped in the GSM system (see in particular col. 23, lines 12-20). This means, in the

particular context of the described embodiments, that CDMA BTS 76 is mapped in the system as though it were a GSM-TDMA BTS (see in particular col. 22, lines 52-54).

In order to determine when a handover should take place, a MS in communication with a current base station of one type (CDMA or TDMA) monitors RF signals originating from another base station, which may be a base station of the other type (TDMA or CDMA, respectively). A message sequence between the current base station and the MS enables the MS to acquire appropriate synchronization information with regards to the new base station, and to report back on this information to the current base station. The information is used by the system to enable the MS to establish an air interface with the new base station, whereupon the handover takes place without substantially interrupting communications between the MS and the network. In the context of Grilli, such handovers between base stations are referred to as "mobile-assisted handovers" (see col. 2, lines 31-46).

Most importantly, it must be understood and appreciated that a mobile station according to Grilli is capable of communicating with both types of base stations, by appropriately switching between TDMA and CDMA air interfaces. This is particularly to be seen in Figure 2A, wherein communications protocol stacks of both types are represented within one and the same mobile station.

According to embodiments of the present invention, on the contrary, any mobile terminal is capable of communicating according to the air interface only of the system to which it belongs (the "first system" in the claims). It cannot communicate in accordance with the air interface of another system (the "second system" in the claims) because the two radio interfaces are incompatible.

Indeed, the present invention aims to propose a solution to allow the interoperability between two systems for radio communications with mobiles having mutually incompatible respective radio interfaces. Claim 1 currently on file thus recites allocating a traffic channel emulating the radio interface of a first radiocommunications system by a base station of a second radiocommunications system, distinct from the first radiocommunications system, the radio interface of the first and second system being incompatible with each other. The other independent claims (8 and 10) recite similar elements, allowing for differences in claim drafting of means and system claims.

These features which are recited in independent claims 1, 8 and 10, set out the above mentioned difference between Grilli and the present invention. For this reason, the teaching of Grilli is not relevant to the present invention.

This lack of technical relevancy notwithstanding, it is hereby respectfully submitted that, in particular, the allocation of a traffic channel emulating the radio interface of another radio communications system is not disclosed in Grilli.

The disclosure in Grilli admittedly encompasses a method of enabling handovers between an initial cell of a first wireless communication system (e.g., of the TDMA type) and a target cell of second wireless communication system (e.g. of the CDMA type), wherein the cells of the first communication system and the cells of the second communication system are mapped together. This mapping of cells is illustrated on Fig. 8 of Grilli. (see also the description of Grilli., col.22, lines 5-11).

Nevertheless, there is nothing in the disclosure of Grilli. to support the Examiner's statement that the base stations of any of the two overlapping systems are capable of emulating the air interface of the other system. On the contrary, Grilli. mentions that "the CDMA cells are mapped into the GSM system, at minimal hardware expense and substantially without the necessity of reprogramming existing GSM system elements" (col. 23, lines 16-20). This actually teaches away from the solution according to the claimed invention wherein base stations of the second system are capable of allocating a traffic channel emulating the radio interface of the so-called first system.

Further, it is hereby respectfully submitted that, Grilli fails to disclose the claimed features relating to the mutual help channel. From a structural standpoint, the Examiner has not shown that Grilli. discloses a mutual help channel. The Examiner seems to equate the pilot beam according to Grilli., which carries downlink channels (i.e., from base stations to MS) downlink to each cell, with the claimed mutual help channel. Although the claims do not contain any precise definition of a mutual help channel, it is respectfully submitted that a mutual help channel understood by those skilled in the art to be an uplink channel (i.e., from mobile terminals to base stations) commonly shared by all the mobile terminals of a system for radio communications with mobiles.

In the context of Professional Mobile Radio (PMR), such a channel is usually a traffic channel which, typically, may be used by a policeman facing a situation of emergency, for requesting urgent assistance from all the policemen in the surroundings. Still within that

context, typically, this channel has priority over all other traffic channels. Although various embodiments are possible, it is clear that the normal pilot beam according to Grilli, which carries synchronisation and control information, may not be compared with the mutual help channel as claimed.

From a functional standpoint, in addition, there is no indication in Grilli, that a pilot beam of one system is monitored by the base station of the other system. In Grilli., pilot beams carry downlink channels and, therefore, they are monitored by the MS, not by the base stations.

In conclusion, the Examiner has not shown that Grilli discloses or even suggests the step of monitoring the mutual aid channel of the first system by a base station of the second system.

With respect to the dependent claims 2-7, 9 and 11, as they refer to the claims 1, 8 and 10, much of the same argument applies. Therefore, these claims derive their patentability from the patentability of the claims to which they refer.

To the extent that it may be useful to more completely address all issues raised in the present Office Action, the Examiner is respectfully invited to refer to applicant's remarks on the teachings of the Raith reference as submitted in response to the previous Office Actions.

In view of the foregoing, the Applicant respectfully requests that the rejection of Claims 1-11 under 35 U.S.C. § 102 (e) be withdrawn.

Conclusion

It is believed that the present application is in condition for formal allowance. Accordingly, a Notice of Allowance is respectfully requested in due course. Should the Examiner determine any minor informalities that need to be addressed, he is encouraged to contact the undersigned attorney at the telephone number below.

Respectfully submitted,

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